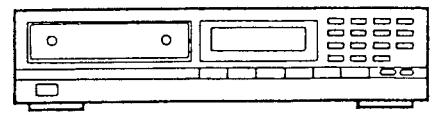
S/M Code No.89 – 030 DATE OF ISSUE 6/1989 – T

AIWA®

DX-D9

SERVICE MANUAL



COMPACT DISC PLAYER

• BASIC CD MECHANISM : KSL – 150ACM3 • TYPE. Y,YU,YK

SPECIFICATIONS

Type:	Compact disc digital audio system
Disc:	Compact disc
Scanning method:	Non contact optical scanner (semiconductor laser application)
Laser:	Semiconductor laser (λ=780 nm)
Rotation speed:	Approx. 500 rpm – 200 rpm (CLV) Approx. 1000 rpm – 400 rpm (CLV)(double speed)(Y ONLY)
Error correction:	Cross Interleave, Read Solomon code
No. of channels:	2 channels
D-A conversion:	16-bit linear
Frequency response:	10 Hz – 20 kHz ±2 dB
Harmonic distortion:	0.04% (1kHz, 0 dB)
Dynamic range:	90 dB
Channel separation:	82 dB (1 kHz, 0 dB)
S/N Ratio:	96 dB (1 kHz)
Wow/Flutter:	Unmeasurable

Disc specifications

Playing time:	Approx. 60 minutes (max. 74 minutes)
Dimensions:	Diameter 120 mm, Thickness 1.2 mm
Track pitch:	1.6 μm
Sampling frequency:	44.1 kHz

Power and Miscellaneous

dimensions:	360 (W) × 86.5 (H) × 302 (D) mm
Weight:	3 kg

• Design and specifications are subject to change without notice.

AIWA Co., Ltd.

Tokyo Japan

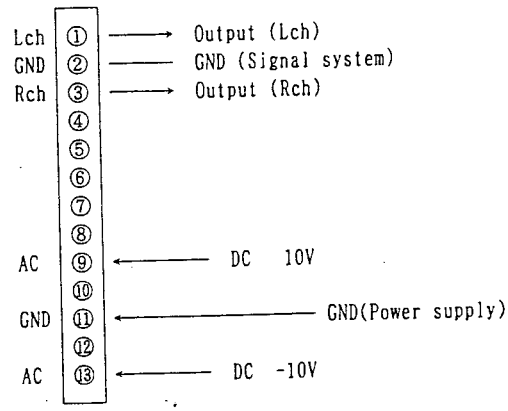
Printed in Japan

Precautions when Servicing

The DX-D9 has no power supply circuit. Power if thus supplied from MX-D9 using a ⑬-pin flat cable. During repair, connect DX-9 to the MX-D9 to supply the power.
When there is no MX-D9 supply the power in the manner below.

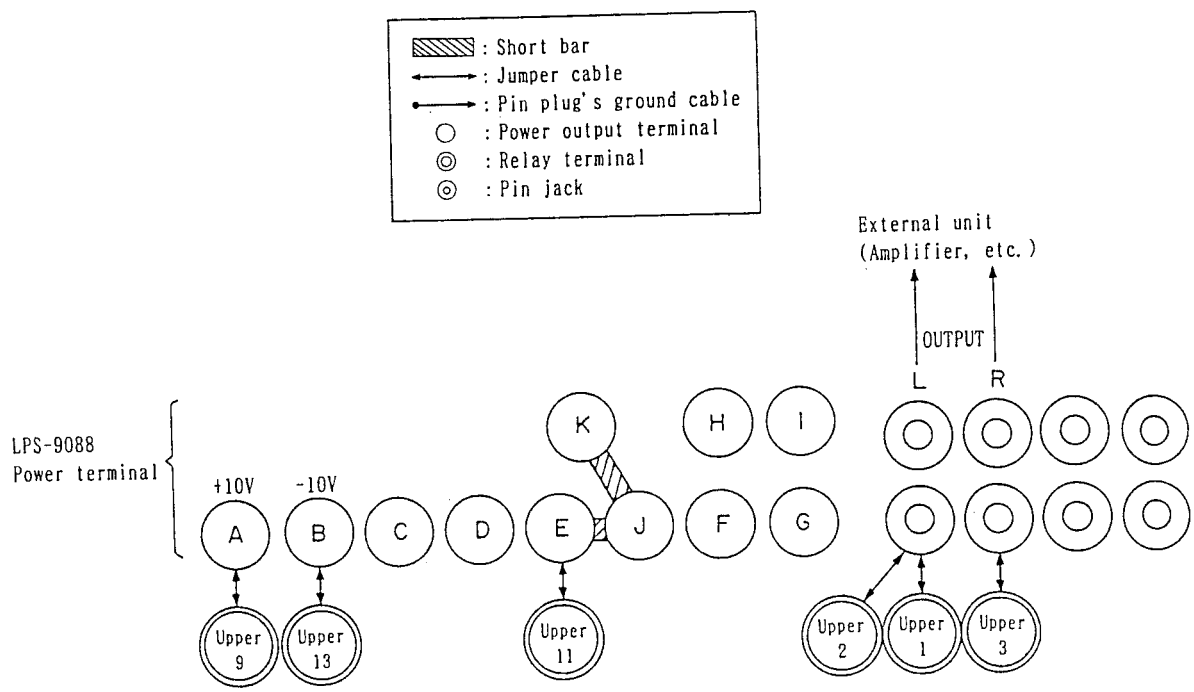
(When repairing only one component)

1. The voltages below are supplied to each CT51 terminal from the external power source.



2. Multi-Power (LPS-9088) Connection

Connect to J1 of the LPS-9088 using a multi-conversion harness.



ACCESSORIES/PACKAGE LIST

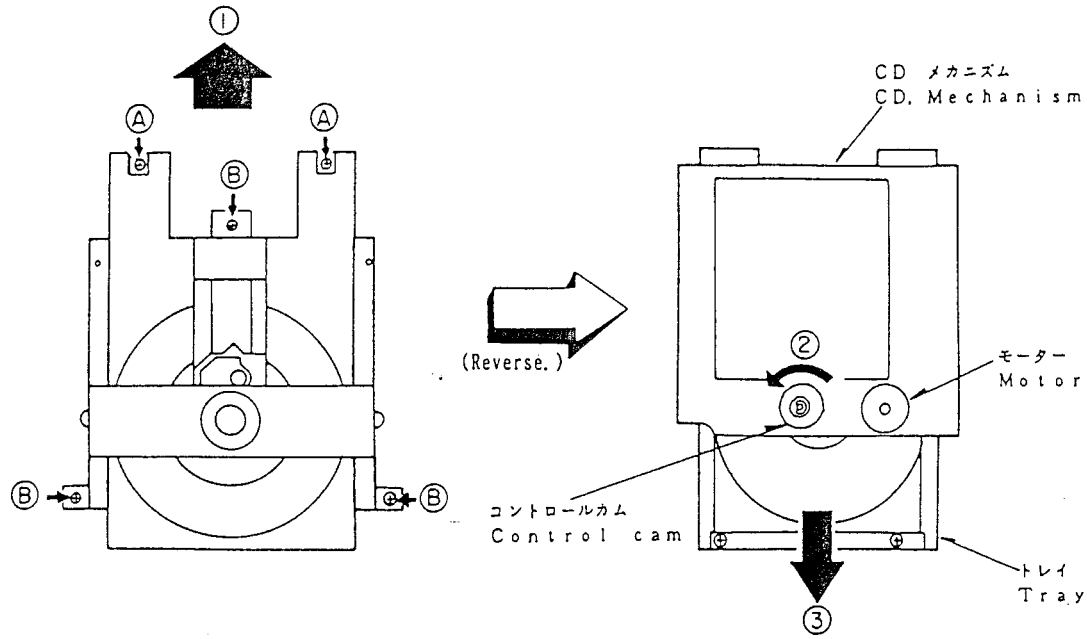
PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1	★81-692-904-019	INSTRUCTION BOOKLET (Y)	※	1
	2	★81-692-905-019	INSTRUCTION BOOKLET YU (YU, YK)	※	1
	3	★81-692-915-018	INSTRUCTION BOOKLET G (Y)	※	1
	4	★81-692-916-018	INSTRUCTION BOOKLET YU, YK (YU, YK)	※	1
	5	★81-689-651-010	CONN ASSY, 13P (CD)		1

DISASSEMBLY INSTRUCTIONS

1. Removing the Tray

• For AUTOMATIC operation
1) Turn on the power.
2) Remove 2 screws (Ⓐ).
3) Push the OPEN/CLOSE key, take out the tray, and pull out it toward you.

• For MANUAL operation
1) Remove 2 screws (Ⓐ).
2) Remove 3 screws (Ⓑ) and detach the CD mechanism while moving it in the direction indicated by arrow ①.
3) Reverse the CD mechanism and turn the control cam in the direction indicated by arrow ②.
4) Pull out the tray in the direction indicated by arrow ③ immediately when it is moved.



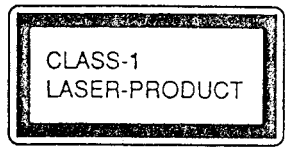
WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

"Varoitus! Suojakoteloa ei saa avata. Laite sisältää laserdiodin, joka lahettää näkymätöntä silmille vaarallista lasersäteilyä."

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



ADVARSEL!

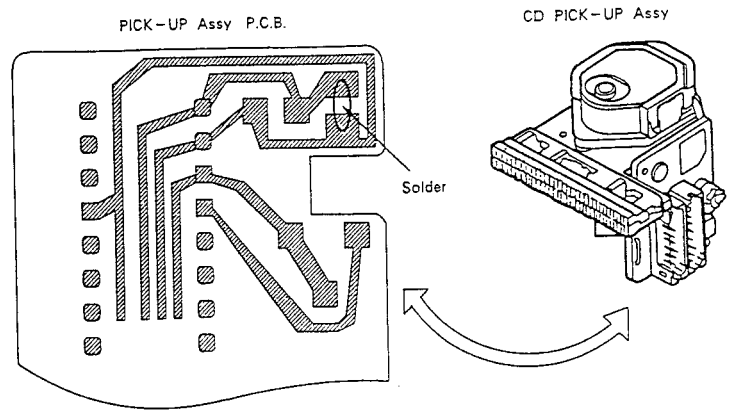
Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

"Denna apparat innehåller laserkomponent som avger laserstrålning som överskrider gränsen för laserklass 1."

Precaution to replace Optical block (KSS−150A)

Body or clothes electrostatic potential could ruin laser diode in the optical block.
Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection. remove solder shown in figure below.



WAVE FORM, VOLTAGE

SCHEMATIC DIAGRAM POINT	VOLTAGE, WAVEFORM
①	Power cont. OFF 4.5V ON 0V
②	Power reference voltage ON 2V OFF 0V
③	LC6538D-4109, ⑯ OSC1 4.32MHz 4.5V 0V
④ ⑤ ⑥	5V VDD Q51, B 1.2V IC51, ⑳, $\overline{RES}$ 50ms
⑦ ⑧	LC7863 ON OFF VDD $\overline{RES}$ 0.5s 150ms
⑨	Laser current both ends of R187 (10Ω-1/8) Laser on 669mV (66.9mA)
⑩	LA9201 ㉙ pin LDD (Laser diode drive) Laser on -4.8V

SCHEMATIC DIAGRAM POINT	VOLTAGE, WAVEFORM
⑪ ⑫	Focus search voltage For no DISC 5V 500ms FOCS 0V 800ms +2V 0V (AT STOP) -2V
⑬	LC7863, ② AO (AI inversion output) output 5V The frequency is double the PCK/FSEC frequency at pin ⑱ of LC7863.
⑭	The VCO should be adjusted using the PCK/FSEC frequency at pin ⑱.
⑯	2.1 ± 0.2V 0
⑰	MUTE OFF -4.8V MUTE ON +3.6V
⑱	Emphasis ON 2.6V Emphasis OFF -2.0V
㉑	Indication on -26V
㉒	ON AC 9.5Vp-p 100kHz

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
===IC===		
	87-001-652-010	IC, HM6116LP-2
	87-001-173-019	IC, LA6510
	87-001-567-019	IC, LA6520
	87-001-617-019	IC, LA9201M
	81-692-629-010	IC, LC6538D-4109
	87-001-616-010	IC, LC7863K
	87-001-619-019	IC, LC7881
	87-001-171-019	IC, NJM2068D
	87-001-786-019	IC, NJM4560D(YU, YK)
	87-020-881-019	IC, NJM78L05A
	87-001-657-019	IC, NJU6321(Y)
	87-027-666-019	IC, TC4052BP
===TRANSISTOR===		
	89-502-464-019	FET, 2SK246Y(Y)
	89-110-154-019	TRANSISTOR, 2SA1015Y
	89-106-837-019	TRANSISTOR, 2SA683S
	89-213-750-019	TRANSISTOR, 2SB1375
	89-318-154-019	TRANSISTOR, 2SC1815Y
	89-319-233-019	TRANSISTOR, 2SC1923(O)
	89-325-002-019	TRANSISTOR, 2SC2500
	89-328-785-019	TRANSISTOR, 2SC2878A, B
	89-420-120-019	TRANSISTOR, 2SD2012
	87-026-219-019	TRANSISTOR, DTA144ES
	87-026-218-019	TRANSISTOR, DTC144ES
===DIODE===		
	87-020-870-019	DIODE 1S1585
	87-020-110-019	DIODE 1SS177
	87-027-376-019	DIODE, 1B4B41
	87-001-566-019	DIODE, ZENER HZ-2B1
	87-027-301-019	DIODE, ZENER HZ-3A1
	87-027-513-019	DIODE, ZENER HZ-6B2L
===MAIN CIRCUIT BOARD SECTION===		
C1	*87-010-262-019	CAP, ELECT 3300-16V SME(Y, YU)
C1	*87-010-262-019	CAP, ELECT 3300-16V SME(YK)
C2	*87-015-997-019	CAP, ELECT 2200-16V SME(Y, YU)
C2	*87-015-997-019	CAP, ELECT 2200-16V SME(YK)
C3	*87-018-134-019	CAP, CERA SS 0.01
C8	*87-018-209-019	CAP, CERA SS 0.1
C9	*87-010-248-019	CAP, ELECT 220-10V
C10	*87-018-134-019	CAP, CERA SS 0.01
C11	*87-010-263-019	CAP, ELECT 100-10V
C12	*87-018-134-019	CAP, CERA SS 0.01
C51	*87-018-134-019	CAP, CERA SS 0.01
C52	*87-010-404-019	CAP, ELECT 4.7-50V SME
C53	*87-018-134-019	CAP, CERA SS 0.01
C54	*87-018-202-019	CAP, CERA SS 6800P
C55	*87-018-134-019	CAP, CERA SS 0.01
C56	*87-018-134-019	CAP, CERA SS 0.01
C57	*87-014-118-019	CAP, PP 0.015G
C58	*87-018-134-019	CAP, CERA SS 0.01
C59	*87-010-391-019	CAP, ELECT 10-35V
C60	*87-010-380-019	CAP, ELECT 47-16V(Y)
C61	*87-010-380-019	CAP, ELECT 47-16V
C62	*87-018-113-019	CAP, CERA SS 33P
C63	*87-018-113-019	CAP, CERA SS 33P
C64	*87-018-134-019	CAP, CERA SS 0.01
C65	*87-018-134-019	CAP, CERA SS 0.01(Y)
C66	*87-018-134-019	CAP, CERA SS 0.01
C67	*87-018-134-019	CAP, CERA SS 0.01
C70	*87-014-118-019	CAP, PP 0.015G
C71	*87-018-105-019	CAP, CERA SS 12P(Y)
C72	*87-018-105-019	CAP, CERA SS 12P(Y)
C73	*87-018-134-019	CAP, CERA SS 0.01(Y)
C74	*87-010-380-019	CAP, ELECT 47-16V(Y)
C75	*87-018-123-019	CAP, CERA SS 220P(Y)
C101	*87-010-401-019	CAP, ELECT 1-50V
C102	*87-010-401-019	CAP, ELECT 1-50V
C103	*87-018-098-019	CAP, CERA SS 3.3P
C104	*87-018-098-019	CAP, CERA SS 3.3P
C107	*87-010-380-019	CAP, ELECT 47-16V
C108	*87-010-380-019	CAP, ELECT 47-16V
C109	*87-018-127-019	CAP, CERA SS 470P(Y)
C110	*87-018-127-019	CAP, CERA SS 470P(Y)
C111	*87-018-131-019	CAP, CERA SS 1000P
C112	*87-018-131-019	CAP, CERA SS 1000P
C113	*87-010-380-019	CAP, ELECT 47-16V
C114	*87-010-380-019	CAP, ELECT 47-16V
C117	*87-010-391-019	CAP, ELECT 10-35V
C118	*87-010-391-019	CAP, ELECT 10-35V
C121	*87-018-109-019	CAP, CERA SS 22P J 50V SL
C122	*87-018-109-019	CAP, CERA SS 22P J 50V SL
C123	*87-018-131-019	CAP, CERA SS 1000P
C151	*87-018-134-019	CAP, CERA SS 0.01
C152	*87-018-111-019	CAP, CERA SS 27P J 50V SL
C153	*87-018-131-019	CAP, CERA SS 1000P
C155	*87-010-391-019	CAP, ELECT 10-35V
C156	*87-010-391-019	CAP, ELECT 10-35V
C159	*87-018-119-019	CAP, CERA SS 100P
C160	*87-018-123-019	CAP, CERA SS 220P(Y)
C161	*87-018-127-019	CAP, CERA SS 470P(YU, YK)
C161	*87-018-123-019	CAP, CERA SS 220P(Y)
C163	*87-018-115-019	CAP, CERA SS 47P
C164	*87-018-117-019	CAP, CERA SS 68P
C165	*87-018-117-019	CAP, CERA SS 68P
C166	*87-018-131-019	CAP, CERA SS 1000P
C167	*87-010-070-019	CAP, ELECT 0.47-50V SRE
C170	*87-018-100-019	CAP, CERA SS 4.7P K 50V SL
C171	*87-018-111-019	CAP, CERA SS 27P J 50V SL
C174	*87-010-380-019	CAP, ELECT 47-16V
C175	*87-010-380-019	CAP, ELECT 47-16V
C177	*87-010-380-019	CAP, ELECT 47-16V
C178	*87-010-380-019	CAP, ELECT 47-16V
C179	*87-018-134-019	CAP, CERA SS 0.01
C180	*87-010-263-019	CAP, ELECT 100-10V
C182	*87-010-380-019	CAP, ELECT 47-16V
C183	*87-010-380-019	CAP, ELECT 47-16V
C184	*87-018-123-019	CAP, CERA SS 220P
C186	*87-018-109-019	CAP, CERA SS 22P J 50V SL
C190	*87-018-119-019	CAP, CERA SS 100P
C192	*87-010-402-019	CAP, ELECT 2.2-50V SME
C193	*87-010-380-019	CAP, ELECT 47-16V
C194	*87-018-134-019	CAP, CERA SS 0.01
C195	*87-018-134-019	CAP, CERA SS 0.01(Y)
C196	*87-010-071-089	CAP, ELECT 1-50V SRE(Y)
C198	*87-010-401-019	CAP, ELECT 1-50V(YU, YK)
C199	*87-010-402-019	CAP, ELECT 2.2-50V SME
C200	*87-018-119-019	CAP, CERA SS 100P
C202	*87-012-363-010	CAP, CERA 180P-50WK
C203	*87-012-364-010	CAP, CERA 56P-50WK
C206	*87-010-380-019	CAP, ELECT 47-16V
C208	*87-010-380-019	CAP, ELECT 47-16V
C209	*87-018-134-019	CAP, CERA SS 0.01
C211	*87-018-134-019	CAP, CERA SS 0.01
C212	*87-018-134-019	CAP, CERA SS 0.01
C213	*87-010-380-019	CAP, ELECT 47-16V
C214	*87-010-380-019	CAP, ELECT 47-16V
C216	*87-018-131-019	CAP, CERA SS 1000P
C217	*87-018-134-019	CAP, CERA SS 0.01
C218	*87-010-401-019	CAP, ELECT 1-50V
C219	*87-018-134-019	CAP, CERA SS 0.01
C222	*87-018-209-019	CAP, CERA SS 0.1
C223	*87-018-209-019	CAP, CERA SS 0.1

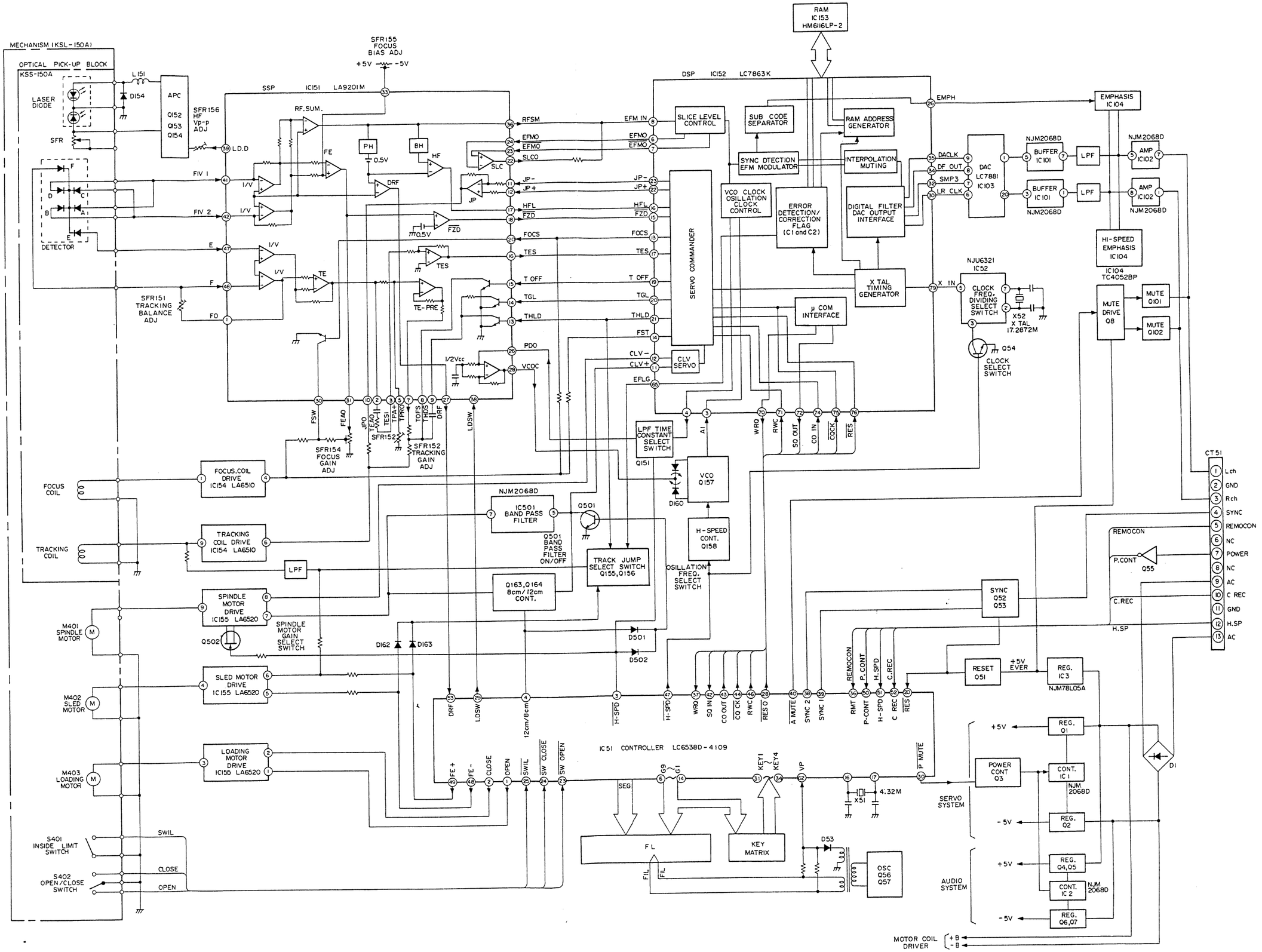
REF. NO.	PART NO.	DESCRIPTION
C224	*87-018-107-019	CAP, CERA SS 18P(YU, YK)
C225	*87-018-107-019	CAP, CERA SS 18P(YU, YK)
C226	*87-010-133-019	CAP, ELECT BP 2.2-50V
C230	*87-018-119-019	CAP, CERA SS 100P(Y)
C231	*87-018-134-019	CAP, CERA SS 0.01
C233	*87-018-134-019	CAP, CERA SS 0.01(Y)
C234	*87-018-134-019	CAP, CERA SS 0.01
C236	*87-010-404-019	CAP, ELECT 4.7-50V SME
CT51	87-009-064-019	FG CONNECTOR
D160	87-001-718-010	VARI. CAP KV1330
EM1	*87-008-372-019	FILTER, EMI BL OIRNI
EM2	*87-008-372-019	FILTER, EMI BL OIRNI
EM3	*87-008-372-019	FILTER, EMI BL OIRNI
EM101	*87-008-372-019	FILTER, EMI BL OIRNI
EM102	*87-008-372-019	FILTER, EMI BL OIRNI
EM103	*87-008-372-019	FILTER, EMI BL OIRNI
⚠FR1	87-029-124-019	RES, FUEIBLE 2.2 1/4W(YU, YK)
⚠FR2	87-029-124-019	RES, FUEIBLE 2.2 1/4W(YU, YK)
L1	*87-003-147-019	COIL CHOKE 22 UH
L51	*87-003-051-019	COIL 470 UH
L52	*87-003-051-019	COIL 470 UH
L151	*87-003-147-019	COIL CHOKE 22 UH
L152	*87-003-102-019	COIL CHOKE 10 UH
L153	*87-003-102-019	COIL CHOKE 10 UH
L154	*87-003-147-019	COIL CHOKE 22 UH
L155	*81-692-626-019	COIL, VCO
LPF101	81-692-624-019	LPF, 10PD-1286(Y)
LPF101	83-313-617-019	LPF, 10PD-1300(YU, YK)
LPF102	81-692-624-019	LPF, 10PD-1286(Y)
LPF102	83-313-617-019	LPF, 10PD-1300(YU, YK)
SFR151	*87-024-176-019	SFR, 100K
SFR152	*87-024-176-019	SFR, 100K
SFR154	*87-024-172-019	SFR, 10K
SFR155	*87-024-176-019	SFR, 100K
SFR156	*87-024-172-019	SFR, 10K
T51	*81-692-625-019	TRANS, OSC FL
TC151	*87-011-160-019	CAP, TRIMMER 20P(Y)
X51	*83-313-616-019	CERAMIC 4.32MHZ
X52	*81-692-616-019	XTAL RESONATOR 17.2872MHZ(Y)
X53	*83-313-615-019	XTAL RESONATOR 8.6436MHZ(YU, YK)
===FRONT CIRCUIT BOARD SECTION===		
FL301	81-692-617-019	FL, 9BT-60GK
SW301	87-036-142-010	TACT SW(1)
SW302	87-036-142-010	TACT SW(2)
SW303	87-036-142-010	TACT SW(3)
SW304	87-036-142-010	TACT SW(4)
SW305	87-036-142-010	TACT SW(DELETE)
SW306	87-036-142-010	TACT SW(5)
SW307	87-036-142-010	TACT SW(6)
SW308	87-036-142-010	TACT SW(7)
SW309	87-036-142-010	TACT SW(8)
SW310	87-036-142-010	TACT SW(EDIT)
SW311	87-036-142-010	TACT SW(REPEAT/BLANK)
SW312	87-036-142-010	TACT SW(9)
SW313	87-036-142-010	TACT SW(0)
SW314	87-036-142-010	TACT SW(+10)
SW315	87-036-142-010	TACT SW(PROGRAM/CHECK)
SW316	87-036-142-010	TACT SW(DISPLAY)
SW317	87-036-142-010	TACT SW(RANDOM)
SW318	87-036-142-010	TACT SW(OPEN/CLOSE)
SW319	87-036-142-010	TACT SW(F BWD/B SKIP)
SW320	87-036-142-010	TACT SW(F FWD/F SKIP)
SW321	87-036-142-010	TACT SW(STOP)
SW322	87-036-142-010	TACT SW(PAUSE)
SW323	87-036-142-010	TACT SW(PLAY)

REF. NO.	PART NO.	DESCRIPTION
===SWITCH CIRCUIT BOARD SECTION===		
SW325	87-036-142-010	TACT SW(POWER)
===MOTOR-1 CIRCUIT BOARD SECTION===		
※PCB-D	91-625-848-110	MOTOR-1 C.B(RF-310T-11400)
※PCB-D	91-628-263-110	MOTOR-1 C.B(MDN-4RA3NTAS/4RA3ETA)
※M401	9X-264-077-010	MOTOR GEAR ASSY(SLED) (RF-310T-11400)
※M401	9X-264-134-410	MOTOR GEAR ASSY(SLED) (MDN-4RA3ETA)
※M402	9X-264-133-710	MOTOR ASSY(W/CHASSIS, T.T) (SPINDLE)(RF-310T-11400)
※M402	9X-264-134-810	MOTOR ASSY(W/CHASSIS, T.T) (SPINDLE)(MDN-4RA3NTAS)
S401	91-570-822-210	LEAF SW(INSIDE LIMIT)
===MOTOR-2 CIRCUIT BOARD SECTION===		
M403	9X-246-133-610	MOTOR ASSY(LOADING)
===H-SPD CIRCUIT BOARD SECTION (Y ONLY)===		
C501	*87-010-401-019	CAP, ELECT 1-50V
C502	*87-018-209-019	CAP, CERA SS 0.1
C503	*87-010-383-019	CAP, ELECT 33-25V SME
C504	*87-010-383-019	CAP, ELECT 33-25V SME
C505	*87-010-133-019	CAP, ELECT BP 2.2-50V
C506	*87-010-401-019	CAP, ELECT 1-50V
===MISCELLANEOUS===		
	98-848-046-510	PICK UP KSS-150A
S402	91-571-312-110	LEAF SW(OPEN/CLOSE)

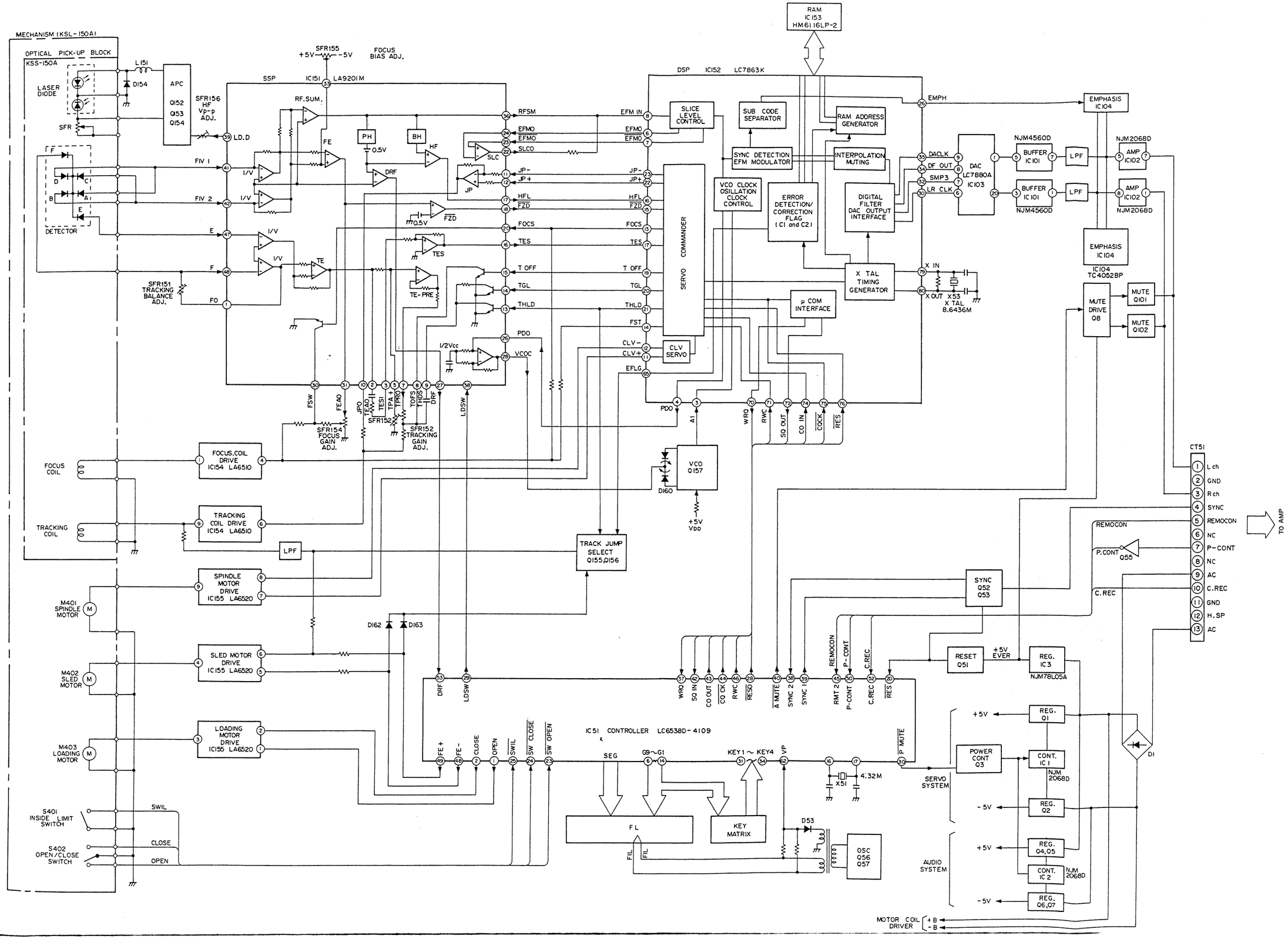
※Caution

Two Types of the spindle (DISC) motor and sled motor are used, but they are not compatible.
Check the part numbers (MDN ····, RF ····) on the labels of motors and replace motors with the same one.

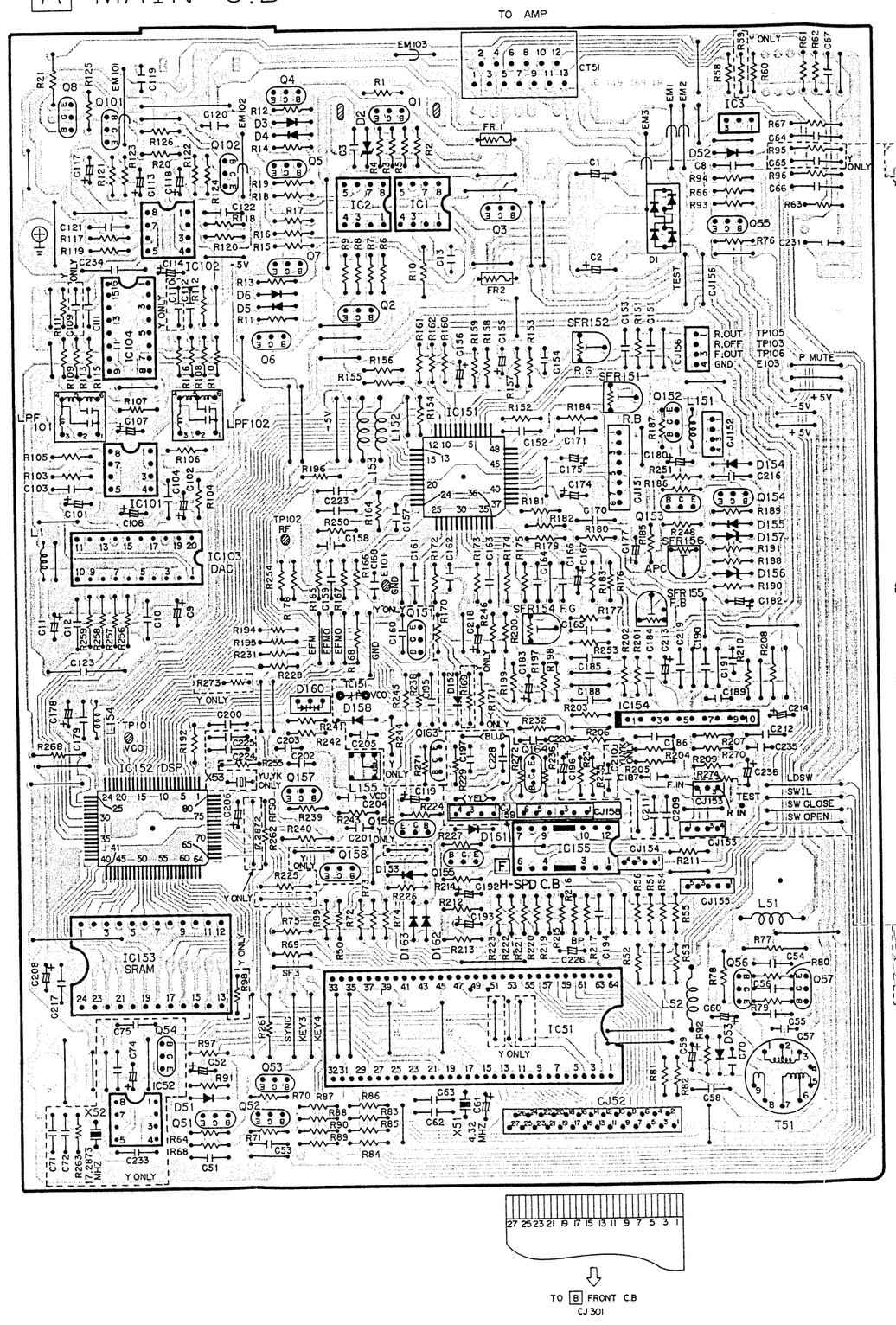
BLOCK DIAGRAM – 1 (Y MODEL)



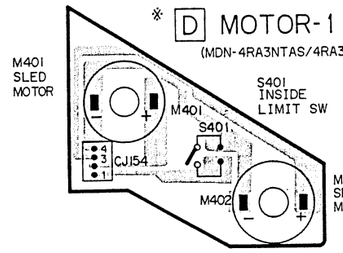
BLOCK DIAGRAM – 2 (YU, YK MODELS)



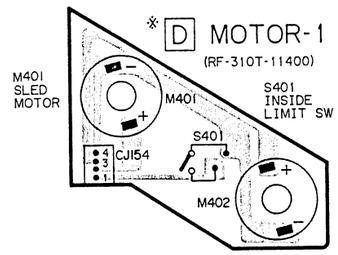
A MAIN C.B



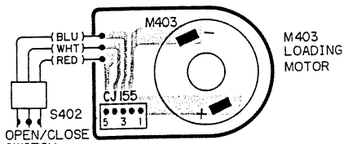
※ D MOTOR-1 C.B
(MDN-4RA3NTAS/4RA3ETA)



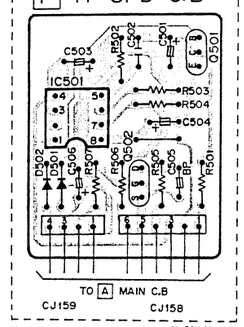
※ D MOTOR-1 C.B
(RF-310T-11400)

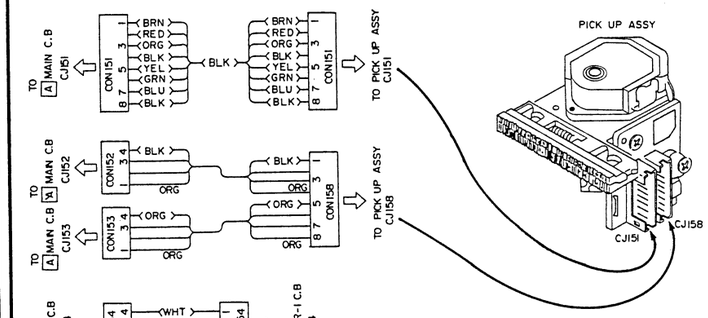


E MOTOR-2 C.B

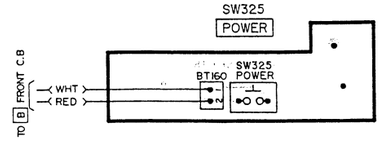


F H-SPD C.B



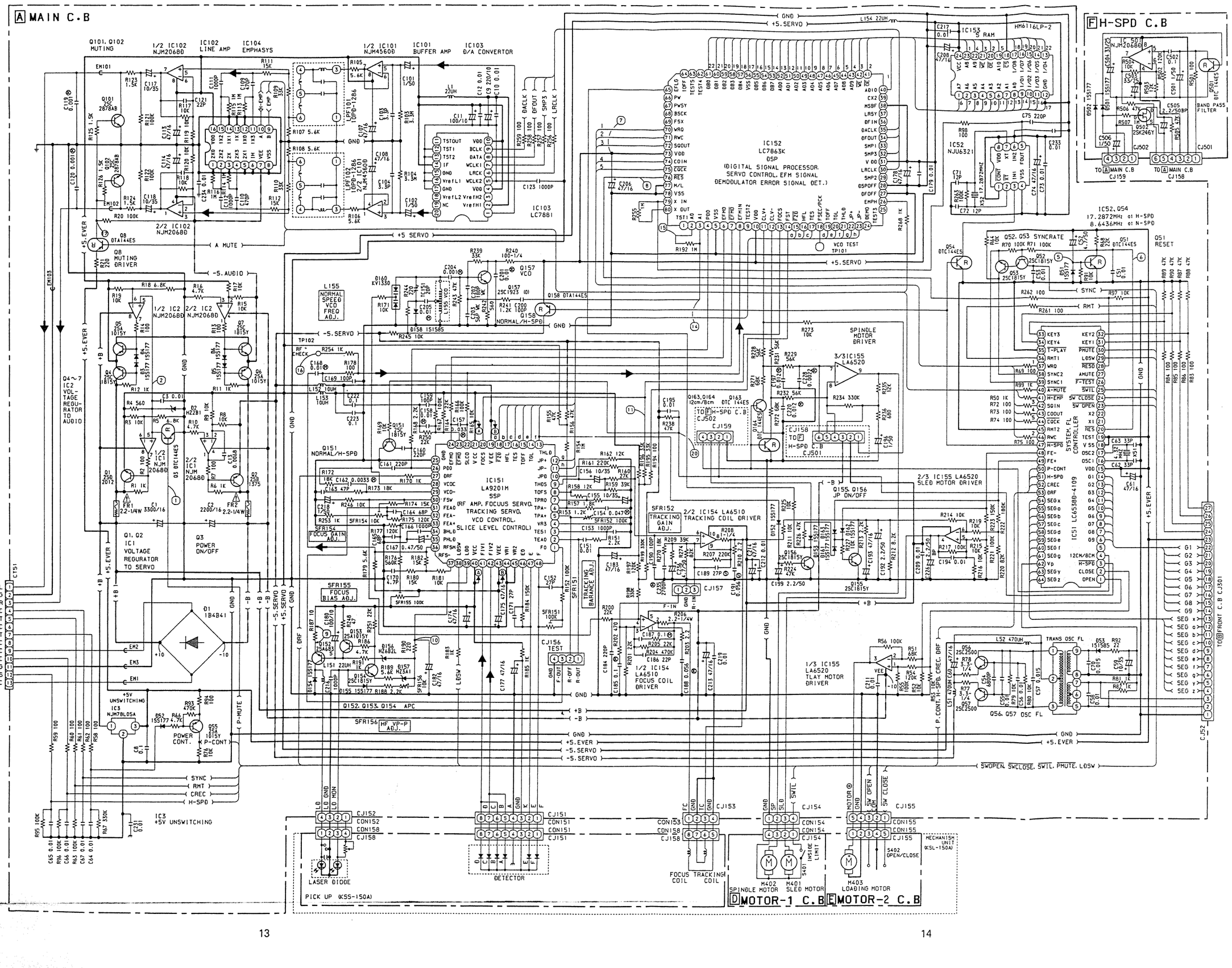


C SWITCH C.B

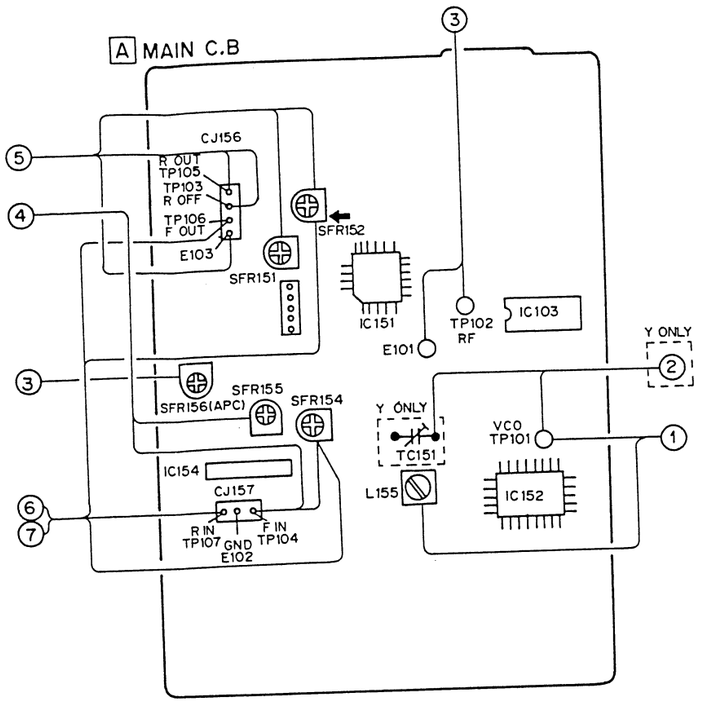


※Caution
Two types of the spindle (DISC) motor and sled motor used, but they are not compatible.
Check the part numbers (MDN ····, RF ····) on the lab of motors and replace motors with the same one.

SCHEMATIC DIAGRAM – 1 (Y MODEL)



ADJUSTMENT



① Normal speed VCO Frequency Adjustment

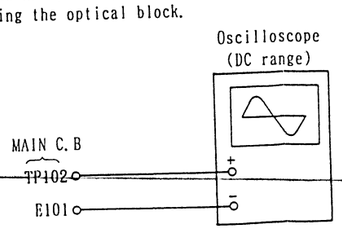
1. Open the tray using the OPEN/CLOSE button.
2. Connect probe (10:1) of frequency counter to TP101, E101.
3. Adjust L155 so that the frequency counter reading is 4.27±0.01MHz.

② Double speed VCO Frequency Adjustment(Y ONLY)

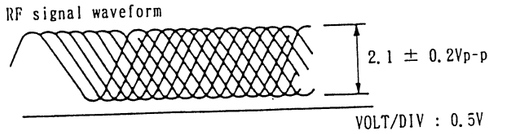
1. Turn the power ON while pressing the RANDOM and REPEAT/BLANK button to enter the double speed mode.
2. Open the tray using the OPEN/CLOSE button.
3. Connect the frequency counter to TP101(VCO) and E101.
4. Adjust TC151 so that the frequency counter reading is 8.55±0.01MHz.
5. After adjustment is completed, turn the power off.
6. After completing the above adjustments, check that the normal speed adjustment frequency has not been affected adversely.

③ HF Vp-p Adjustment

Make the HF Vp-p adjustment when replacing and repairing the optical block.

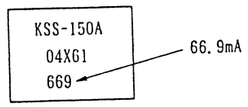


1. Connect an oscilloscope to TP102, E101.
2. Turn on the power switch.
3. Insert disc YEDS-18 (YEDS-1) and press the ▷PLAY button.
4. Check that the waveform on the oscilloscope is as shown below. The adjustment should be made using SFR156(APC) on the main board.



Note: The laser current can be checked using the voltage at both sides of R187 (10Ω). ±6.0mA should be supplied with respect to the current value on the label of the back of the laser pick-up.

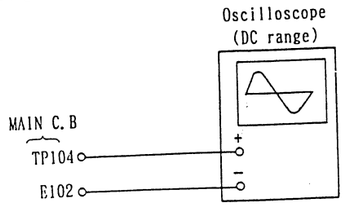
(Note)



$$\text{Laser current Iop} = \frac{\text{Voltage at both sides of R187}}{10\Omega}$$

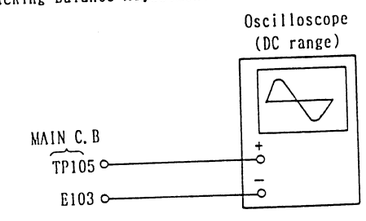
④ Focus Bias Adjustment

Make the focus bias adjustment when replacing and repairing the optical block.



1. Connect probe (10:1) of oscilloscope to TP104, E102.
2. Turn on the power switch. Then, put the set into the STOP mode.
3. Adjust SFR155(FB) so that the voltage at test point is 0±0.01V.

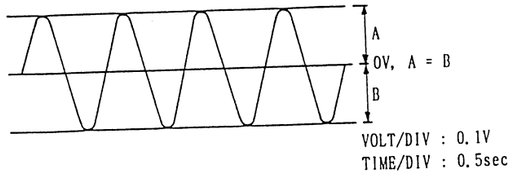
⑤ Tracking Balance Adjustment



1. Connect probe (10:1) of oscilloscope to TP105, E103.
2. Turn on the power switch.
3. Insert disc YEDS-18 (YEDS-1) and press the ▷PLAY button.
4. Connect TP103 on the main circuit board to GND or connect a terminal (⬅) of SFR152(RG) on the main circuit board to GND.

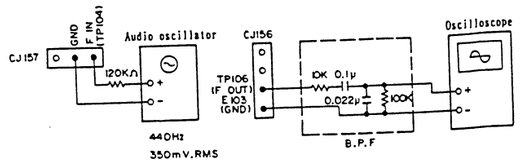
Note: The set enters the STOP mode a few seconds after connected to GND. When readjustment is required, change the power switch from off to on.

5. Adjust SFR151(RB) so that the waveform on the oscilloscope is vertically symmetrical as shown in the figure below.



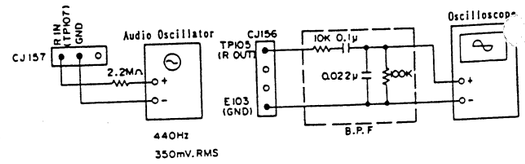
6. After adjustment is completed, remove the ground lead wire.

⑥ Focus Gain Adjustment



1. Play back test disc YEDS-18 (YEDS-1).
2. Connect the oscilloscope to CJ156 through the bandpass filter above.
3. Connect the aduio oscillator to CJ157 through a resister (120kΩ).
   Adjust the oscillator to 440Hz and 350mV RMS.
4. Adjust SFR154(F.G) so that the waveform on the oscilloscope is 300mVp-p.

⑦ Tracking Gain Adjustment

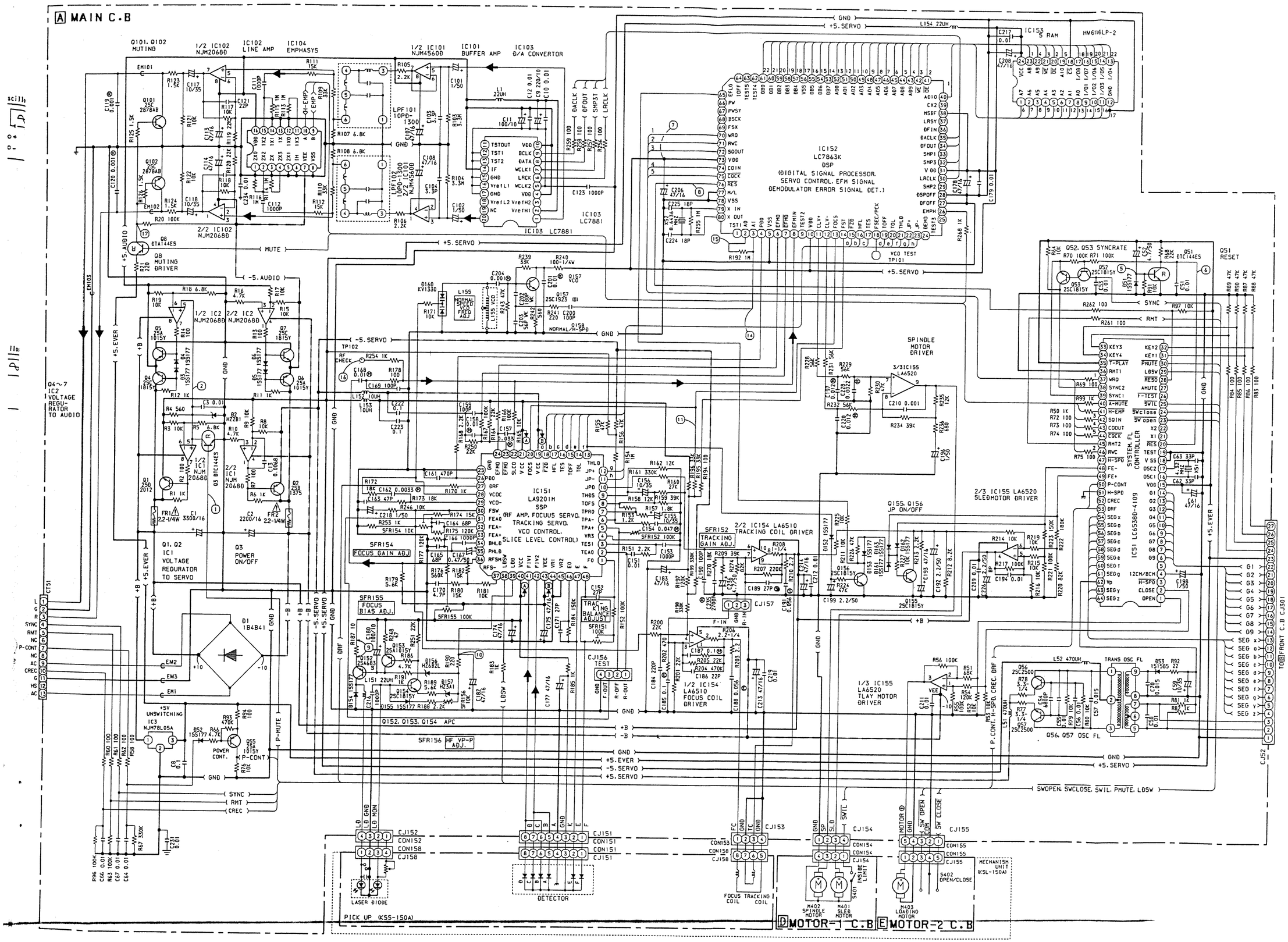


1. Play back test disc YEDS-18 (YEDS-1).
2. Connect the oscilloscope to CJ156 through the bandpass filter above.
3. Connect the audio oscillator to CJ157 through a resister (2.2MΩ).
   Adjust the oscillator to 440Hz and 350mV RMS.
4. Adjust SFR152(R.G) so that the waveform on the oscilloscope is 300mVp-p.

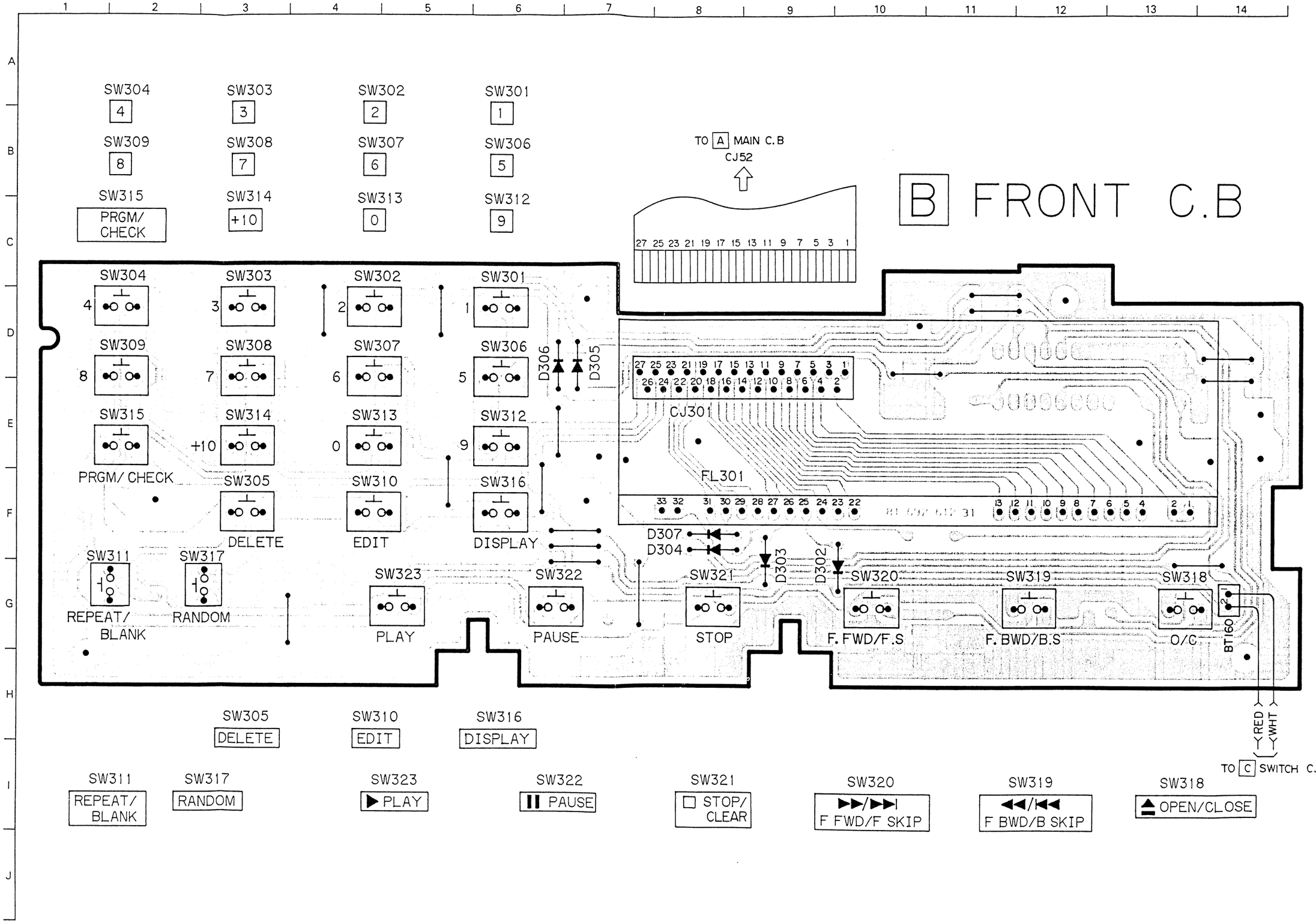
PRACTICAL SERVICE FIGURE

Output Level (TR-2, 1kHz)	: 1.4±0.2V
Frequency Response: (TR-3, 4, 5, 6)	0±1dB (20Hz, 100Hz, 10kHz) -2±2dB (20kHz)

CHEMATIC DIAGRAM – 2 (YU, YK MODELS)



B FRONT C.B


SW304
4
SW303
3
SW302
2
SW301
1
SW309
8
SW308
7
SW307
6
SW306
5
SW315
PRGM/ CHECK
SW314
+10
SW313
0
SW312
9
TO A MAIN C.B
CJ52
27 25 23 21 19 17 15 13 11 9 7 5 3 1
D306
D305
26 24 22 20 18 16 14 12 10 8 6 4 2
CJ301
FL301
33 32 31 30 29 28 27 26 25 24 23 22
13 12 11 10 9 8 7 6 5 4 2 1
D307
D304
D303
D302
SW311
REPEAT/ BLANK
SW317
RANDOM
SW323
PLAY
SW322
PAUSE
SW321
STOP
SW320
F. FWD/F.S
SW319
F. BWD/B.S
SW318
O/C
BT160
RED
WHT
TO C SWITCH C.B
SW305
DELETE
SW310
EDIT
SW316
DISPLAY
SW311
REPEAT/ BLANK
SW317
RANDOM
SW323
▶ PLAY
SW322
❚❚ PAUSE
SW321
□ STOP/ CLEAR
SW320
▶▶/▶▶| F FWD/F SKIP
SW319
◀◀/|◀◀ F BWD/B SKIP
SW318
⏏ OPEN/CLOSE

B FRONT C.B

FL301
FL9BT-60GK

EĐIT · A · B · HI-SPĐ · BLANK · PRGM

TRACK · MIN · SEC

G1: 1x 2a 3b 4c 5d P / 6e 7f 8g 9y 10z

G2: 11x 12a 13b 14c 15d P / 16e 17f 18g 19y 20z

G9 G8 G7 G6 G5 G4 G3

F

Đ302 ISS177
Đ303 ISS177
Đ304 ISS177
Đ305 ISS177
Đ306 ISS177
Đ307 ISS177

SW301 1 · SW302 2 · SW303 3 · SW304 4 · SW305 ĐELETE
SW306 5 · SW307 6 · SW308 7 · SW309 8 · SW310 EĐIT · SW311 REPEAT/BLANK
SW312 9 · SW313 0 · SW314 +10 · SW315 PRGM/CHECK · SW316 ĐISPLAY · SW317 RANĐOM
SW318 OPEN/CLOSE · SW319 F·BWĐ/B·SKIP · SW320 F·FWĐ/F·SKIP · SW321 STOP/CLEAR · SW322 PAUSE · SW323 PLAY

SW301~SW323
EVQ-1140M

(+5 EVER)

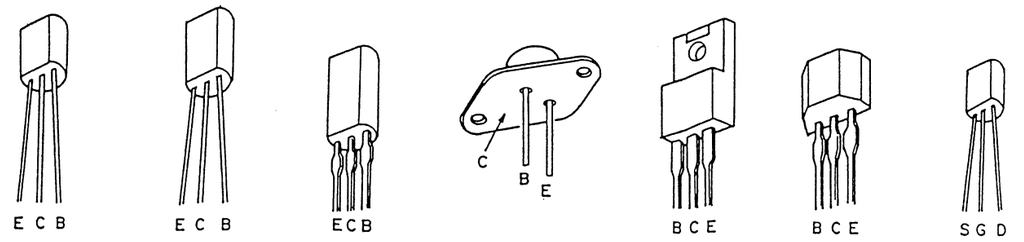
CJ301

C SWITCH C.B

BT160 · BT160

SW325 POWER
EVQ-1140M

TO A MAIN C.B CJ52



2SA1015
2SC1815
2SC1923
2SC2878

2SA683

2SC2500

2SB1375

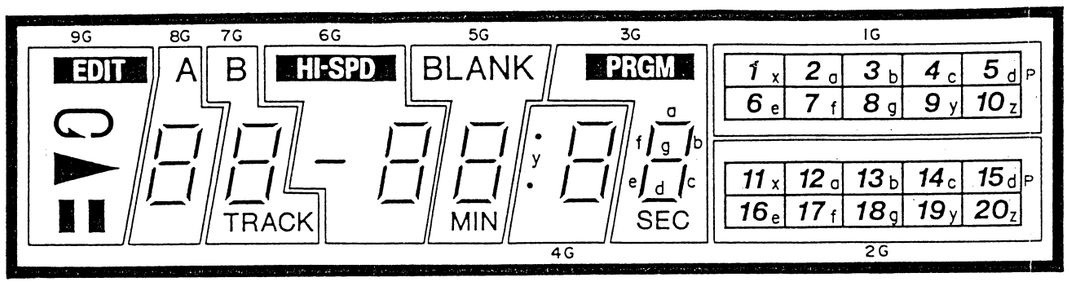
2SD2012

DTA144
DTC144

2SK246

See the DX-M77, M740 for the IC description below.		
	DX-D9	DX-M77, M740
①	LC6538D-4109	LC6538D-3995
②	LA9201M	LA9201M
③	LC7863K	LC7863K
④	LC7881	LC7881

FL DISPLAY (9-BT-60GK)

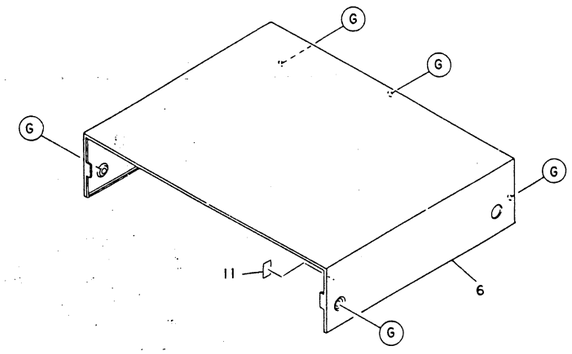


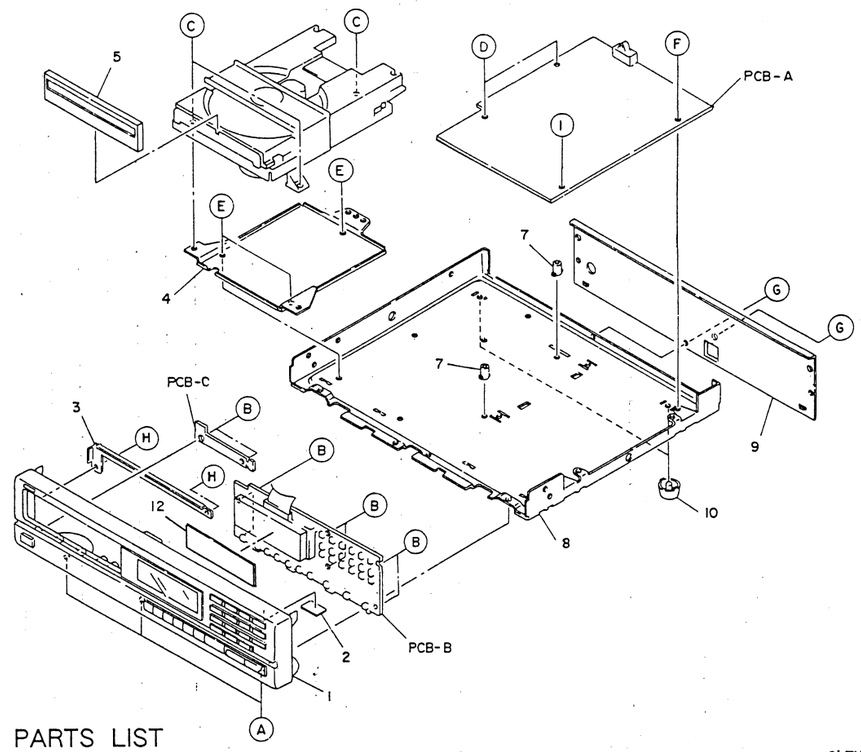
ANODE CONNECTION

	9G	8G	7G	6G	5G	4G	3G	2G	1G
a	↻	a	a	a	a	a	a	12	2
b	▶	b	b	b	b	b	b	13	3
c	–	c	c	c	c	c	c	14	4
d	–	d	d	d	d	d	d	15	5
e	–	e	e	e	e	e	e	16	6
f	–	f	f	f	f	f	f	17	7
g	–	g	g	g	g	g	g	18	8
x	EDIT	A	B	HI-SPD	BLANK	–	PRGM	11	1
y	▮▮	–	TRACK	—	MIN	• •	SEC	19	9
Z	–	–	–	–	–	–	–	20	10
P	–	–	–	–	–	–	–	▦	▦

EXPLODED VIEW – 1

REF. NO.	PART NO.	DESCRIPTION
A	87-573-094-410	VIT+3-6 (B)
B	87-651-096-410	VT$_1$+3-10
C	87-067-566-010	VFTT+3-6
D	87-761-099-410	VFT$_2$+3-15
E	87-591-095-410	QIT+3-8
F	87-761-094-410	VFT$_2$+3-8
G	87-067-660-01	BVT$_2$+3-8 (B)
H	87-741-095-41	UT$_2$+3-8
I	87-067-633-01	BVT$_2$+3-8

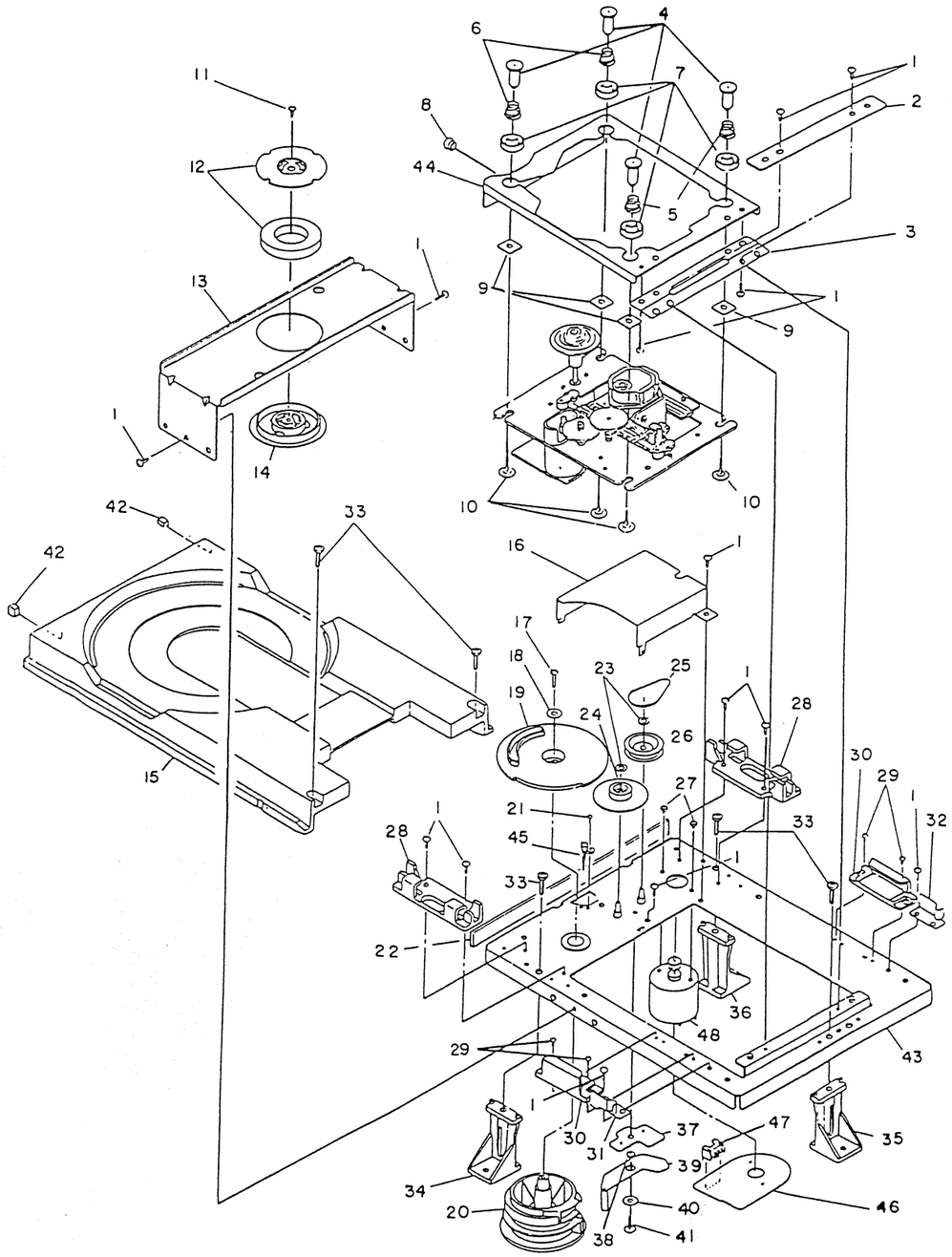




MECHANICAL PARTS LIST

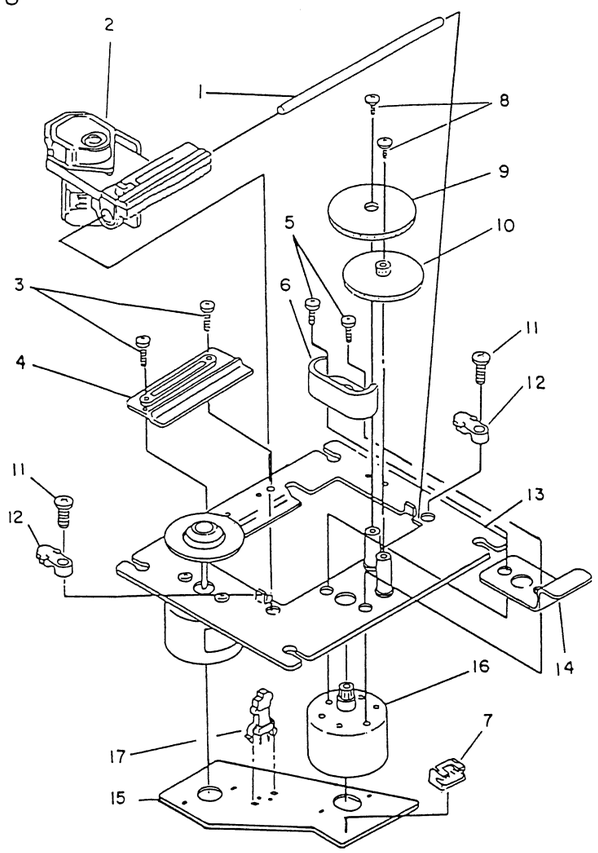
PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1-1	★09-057-035-010	FRONT CABINET ASSY (Y, YK)	※	1
	1-1	★09-057-036-010	FRONT CABINET ASSY (YU)	※	1
	1-2	★81-692-205-019	SHEET CABINET	※	1
	1-3	★81-692-204-019	FRAME CABINET	※	1
	1-4	★81-666-202-010	HOLDER MECHA		1
	1-5	★81-692-002-019	JOINT CD	※	1
	1-6	★81-691-017-010	CABINET, STEEL (Y, YU)		1
	1-6	★83-313-003-118	CABINET, STEEL (YNE, YK)		1
	1-7	★81-664-202-010	HOLDER, PCB		2
	1-8	---	CHASSIS AMP		1
	1-9	★81-692-023-010	PANEL, REAR (YN)	※	1
	1-9	★81-692-024-010	PANEL, REAR (YNE, YK)	※	1
	1-9	★81-692-022-010	PANEL, REAR (YU)	※	1
	1-9	★81-692-025-010	PANEL, REAR (YJ)	※	1
	1-10	★81-675-010-010	FOOT, H10		2
	1-11	★83-313-202-010	SHEET, 17-10 (YNE, YK)		2
	1-12	★81-692-012-010	FILTER CD	※	1

EXPLODED VIEW – 2



PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	2-1	★97-685-862-010	BVTT+2.6×6		14
	2-2	★92-642-170-010	HING HOLDER		1
	2-3	★92-642-164-010	SPRING, HING		1
	2-4	★92-642-160-010	T-SPRING, SHAFT		4
	2-5	★92-642-137-010	SPRING, COIL (B)		2
	2-6	★92-642-139-010	SPRING, COIL (A)		2
	2-7	★92-642-158-010	FOOT (C)		4
	2-8	★92-642-169-010	ROLLER		1
	2-9	★92-642-159-010	T-SPRING, PLATE		4
	2-10	★92-642-142-010	SCREW		4
	2-11	★97-685-132-190	B+2.6×5		1
	2-12	91-452-507-110	MAGNET ASSY		1
	2-13	★92-642-165-010	CHAK CHASSIS		1
	2-14	★92-642-432-010	CHAKING PULLEY		1
	2-15	★92-642-156-010	SPRING, TRAY		1
	2-16	★92-642-149-010	SPRING GEAR COVER		1
	2-17	★97-685-135-190	B+2.6×10		1
	2-18	★94-812-554-000	WASHER		1
	2-19	★92-642-154-020	SPRING, DRIVE GEAR		1
	2-20	★92-642-153-010	SPRING, CONTROL CAM		1
	2-21	★97-685-851-010	BVTT+2×4		1
	2-22	★92-642-157-030	FRON TAPE		1
	2-23	★93-558-708-210	STOPPER WASHER		2
	2-24	★92-642-148-010	SPRING RELAY GEAR		1
	2-25	93-653-387-000	LM BELT		1
	2-26	★94-913-731-010	ROADING PULLEY		1
	2-27	★97-621-775-000	B+2.6×3		2
	2-28	★92-642-161-010	TRAY HOLDER (FRONT)		2
	2-29	★97-621-255-250	PTT+2×4		4
	2-30	★92-642-162-020	TRAY HOLDER		2
	2-31	★92-642-146-010	TRAY GUIDE R		1
	2-32	★92-642-147-010	TRAY GUIDE L		1
	2-33	★97-685-647-790	B+3×10		5
	2-34	★92-642-510-010	MD HOLDER BOSS		1
	2-35	★92-642-512-010	MD HOLDER BOSS (REAR)		1
	2-36	★92-642-511-010	MD HOLDER BOSS L		1
	2-37	★92-642-173-010	RING PLATE		1
	2-38	★92-642-133-020	BOSS		1
	2-39	★9X-264-210-710	STOPPER RING ASSY		1
	2-40	★92-642-172-010	SPACER		1
	2-41	★97-685-143-190	PTPWH+2×8		1
	2-42	★92-642-125-010	DAMPER		2
	2-43	★9X-264-210-610	SPRING MAIN CHASSIS ASSY		1
	2-44	★9X-264-210-510	SPRING SUB CHASSIS ASSY		1
	2-45	91-571-312-110	LEAF SWITCH (OPEN/CLOSE)		1
	2-46	★91-624-793-210	CD MOTOR 2 C.B		1
	2-47	★91-564-721-110	CONNECTOR PIN 5P		1
	2-48	9X-264-133-610	MOTOR ASSY (LOADING)		1

EXPLODED VIEW – 3



PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	3-1	★94-910-431-010	SLIDE SHAFT		1
	3-2	98-848-046-510	PICK UP (KSS-150AHRP)		1
	3-3	★92-642-144-010	PTT+2×6		2
	3-4	★92-641-443-010	SLIDE HOLDER		1
	3-5	★97-621-255-350	P+2×5		2
	3-6	★92-641-434-010	GEAR COVER		1
	3-7	★92-564-720-110	CONNECTOR PIN		1
	3-8	★93-303-809-310	SPECIAL SCREW M1.7–3		2
	3-9	9X-264-076-910	GEAR A		1
	3-10	★92-641-403-050	GEAR B		1
	3-11	★92-641-447-010	STP+2.6×8		2
	3-12	★92-641-448-020	SHAFT CLUMP		2
	※ 3-13	9X-264-133-710	SP MOTOR ASSY (W/CHASSIS, T.T) (DISC) (RF-310T-11400)		1
	※ 3-13	9X-264-134-810	SP MOTOR ASSY (W/CHASSIS, T.T) (DISC) (MDN-4RA3NTAS)		1
	3-14	★92-641-371-010	STOPPER		1
	※ 3-15	★91-625-848-110	CD MOTOR 1 C.B (RF-310T-11400)		1
	※ 3-15	★91-628-263-110	CD MOTOR 1 C.B (MDN-4RA3NTAS/4RA3ETA)		1
	※ 3-16	9X-264-077-010	SLED MOTOR GEAR ASSY (SLED) (RF-310T-11400)		1
	※ 3-16	9X-264-134-410	SLED MOTOR GEAR ASSY (SLED) (MDN-4RA3ETA)		1
	3-17	91-570-822-210	LEAF SWITCH (LIMIT)		1

※Caution
Two types of the spindle (DISC) motor and sled motor are used, but they are not compatible.
Check the part numbers (MDN ····, RF ····) on the labels of motors and replace motors with the same one.